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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,538	09/14/2005	Hans Vondracek		4320

7590 04/28/2008

Max Fogiel
44 Maple Court
Highland Park, NJ 08904

EXAMINER	
CHEN, CHRISTINE	
ART UNIT	PAPER NUMBER
1793	
MAIL DATE	DELIVERY MODE
04/28/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/551,538	VONDRACEK ET AL.	
	Examiner	Art Unit	
	CHRISTINE CHEN	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 September 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-3, 6 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what is to be conveyed in the use of "the marginal area" (claim 1 line 7 and claim 6 line 2), "desired transformation gradient" (claim 1 line 8) and "(critical) degree of transformation" (claim 1 lines 8-9). The same is true for the phrases "marginal region" (claim 2 line 2 and claim 3 line 2) and "maximum transformation." As a result, the scope of said claims is indefinite.

3. Claim 15 recites the limitation "the skew rolling stand" in the second line. There is insufficient antecedent basis for this limitation in the claim.

Meanwhile, the examiner has interpreted claim 15 as being a limitation upon the skew rolling process, wherein the described skew rolling stand is used.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-14, and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bilgen (DE 19839383 used hereinafter with English equivalent 6458226) in view of Hathaway (US 2261878).

Bilgen discloses a method for producing torsionally-strained spring elements, comprising the inductive heating of the starting material, such as a silicon-chromium steel with a carbon content of 0.35%-0.75% which is microalloyed with vanadium or another alloying element, at a rate between 80-150 K/s to a temperature between 900°C and 1200°C (eg a temperature above the

recrystallization temperature of the initial material), austenitizing, holding the temperature for a short time, forming the material into a formed product at a temperature above the recrystallization temperature, quenching to martensite and tempering (see Summary of the Invention section and claims).

It is noted Bilgen does not provide further detail on the nature of formation into a formed product.

However, as disclosed by Hathaway, it is well known in the art to utilize the steps of rolling and coiling to form a spring. An illustration of a spring-making apparatus is shown in Figures 1 and 2. When said apparatus is in use, the steel rod is fed through a straightener 11and feed rolls 12 and 13, thereby straightening said rod, after which the rod is subject to winding or coiling 14. The process carried out by the described elements 11, 12 and 14, wherein the rod is drawn through rollers in order to straighten said rod, is equivalent to the skew rolling described in the instant claim (see Figures 1 and 2, and page 2 lines 29-42).

It would have been obvious to one of ordinary skill in the art to use the well-known forming steps of rolling and coiling as disclosed by Hathaway to the method taught by Bilgen in order to facilitate the formation of a spring product.

With regards to the spring recited in claim 20, the method, comprising the combination of the method of Bilgen and the formation steps provided by Hathaway, would result in said spring product.

With regards to the stabilizer required by claim 21, it is well known in the art that a stabilizer is formed by bending, therefore a substitution of bending in the coiling specified in Hathaway would have been obvious. Moreover, a process, wherein this substitution is in combination with the method of Bilgen, would result in said stabilizer product.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bilgen (DE 19839383 used hereinafter with English equivalent 6458226) and Hathaway (US 2261878) in view of Borowikow (DE 100 30 823 Machine Translation).

Neither Bilgen nor Hathaway describe adjustable rollers in the rolling step of the process as seen in paragraph 5 above.

Borowikow, however describes a rolling mill with adjustable rollers which allows for manufacturing a round material having a variable diameter over its length (see abstract).

It would have been obvious to one of ordinary skill in the art to modify the rolling step of Hathaway with the rolling mill of Borowikow in the method of Bilgen in order to create a spring wherein the varying trend of the height of the spring which is observed according to the variation of load is non-linear.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim1-24 of copending Application No. 10/551537 in view of Hathaway (US 2261878).

The sets of claims are not patentably distinct from each other because the pending claims of the copending application substantially comprise every limitation of the claims of this application, except for the step of coiling or bending the steel in the deforming step. As discussed in paragraph 5 above, as disclosed by Hathaway, it is well-known in the art to coil or wind a rod following a rolling treatment in order to form a spring. Similarly, as discussed in paragraph 5 above, it is well known in the art that a stabilizer is formed by bending, therefore a substitution of bending in the coiling specified by Hathaway would have been obvious. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the coiling of Hathaway following the step of rolling in

order to form a spring. Similar reasoning is provided for its substitute, wherein bending follows the rolling step.

This is a provisional obviousness-type double patenting rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINE CHEN whose telephone number is (571)270-3590. The examiner can normally be reached on Monday-Friday 8:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit 1793

CC